

WHAT IS CLAIMED IS:

1. A system comprising:

a device adapter to transmit data from a device via a network according to a time frame, wherein the time frame is substantially synchronized in the device adapter and at least one other device adapter in communication with the network, the time frame including a plurality of assigned time phases and a free access phase, the time frame repeating periodically; and

wherein the device adapter is configured to transmit data during at least one of a time phase assigned to the device adapter and the free access phase, the device adapter further configured to refrain from transmitting data during a time phase assigned to the at least one other device adapter.
2. The system of claim 1, wherein the network comprises a wireless network.
3. The system of claim 1, wherein the network comprises a wired network.
4. The system of claim 3, wherein a physical layer of the network comprises an Ethernet physical layer.
5. The system of claim 3, wherein the physical layer of the network is other than an Ethernet physical layer.
6. The system of claim 3, wherein the physical layer comprises one or more of a home phone network (HPN) physical layer, a cable network physical layer, and a powerline communication (PLC) physical layer.

7. The system of claim 1, further including at least one device in communication with the device adapter, the device to generate data to be transmitted by the device adapter.

8. The system of claim 1, wherein the device adapter transmits data encoded on a carrier wave using a modulation scheme selected from the group consisting of quadrature amplitude modulation (QAM) and quadrature phase shift keying (QPSK).

9. A system comprising:
a network;
a plurality of devices;
a plurality of device adapters each in communication with one or more of the plurality of devices, wherein each of the plurality of device adapters is configured to transmit data from at least one of the plurality of devices over the network according to a time frame, wherein the time frame is substantially synchronized in the plurality of device adapters, the time frame including a plurality of assigned time phases and a free access phase, the time frame repeating periodically;
and

wherein each device adapter is configured to transmit data during at least one of a time phase assigned to the device adapter and the free access phase, each device adapter further configured to refrain from transmitting data during a time phase assigned to a different device adapter of the plurality of device adapters.

10. The system of claim 9, wherein the network comprises a wireless network.

11. The system of claim 9, wherein the network comprises a wired network.
12. The system of claim 11, wherein a physical layer of the network comprises an Ethernet physical layer.
13. The system of claim 11, wherein the physical layer of the network is other than an Ethernet physical layer.
14. The system of claim 11, wherein the physical layer comprises one or more of a home phone network (HPN) physical layer, a cable network physical layer, and a powerline communication (PLC) physical layer.
15. The system of claim 9, wherein the device adapter transmits data encoded on a carrier wave using a modulation scheme selected from the group consisting of quadrature amplitude modulation (QAM) and quadrature phase shift keying (QPSK)..
16. A method of controlling communications on a network, the method comprising:
maintaining a substantially synchronized time frame among a plurality of device adapters interconnected by a network, the time frame having a plurality of assigned time phases and a free access phase, the time frame repeating periodically; and
controlling a first device adapter to transmit data during at least one of a time phase assigned to the first device adapter and the free access phase and to refrain from transmitting data during a time phase assigned to another device adapter.

17. The method of claim 16, further comprising controlling the first device adapter to transmit the data on a wireless network.

18. The method of claim 16, further comprising controlling the first device adapter to transmit the data on a wired network.

19. The method of claim 18, wherein the wired network has a physical layer comprising an Ethernet physical layer.

20. The method of claim 18, wherein the wired network has a physical layer comprising other than an Ethernet physical layer.

21. The method of claim 20, wherein the wired network has a physical layer comprising at least one of a home phone network (HPN) physical layer, a cable network physical layer, and a powerline communication physical layer.

22. The method of claim 16, further comprising controlling the first device adapter to transmit the data encoded on a carrier wave using a modulation scheme selected from the group consisting of quadrature amplitude modulation (QAM) and quadrature phase shift keying (QPSK).